

REMARKS

Claims 1-81 were pending in the present application. The Examiner has rejected claims 1-61 and 75-81 and has allowed claims 62-74. Claims 44, 47, 48, 55 and 75 have been amended without prejudice. Claims 46 and 81 have been cancelled without prejudice. After the amendment, claims 1-45 and 47-80 are pending.

Claims 62-74: Allowed Claims

Applicants gratefully acknowledge the indication by the Examiner that claims 62-74 were allowed.

Claims 16-22, 36-43 and 55-61: Objected Claims

Applicants gratefully acknowledge the indication by the Examiner that claims 16-22, 36-43 and 55-61 recite patentable subject matter.

Placing Claim 55 into Independent Form

Since claim 55 contains patentable subject matter, Applicants have amended claim 55 into an independent claim by including the elements as set forth in claim 44. It is believed that independent claim 55 and its object dependent claims 56-61 are in condition for allowance.

An excess independent claim fee is due. The Commissioner is hereby authorized to charge any fees, fee deficiencies or to credit any overpayments to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Claims 1-15 and 23-35

Claims 1-15 and 23-35 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,590,943 B1 (“Ali”) in view of U.S. Patent No. 5,678,222 (“Hornak”). Applicants respectfully traverse the rejection as set forth below.

Claim 1 recites, in part, “a bypass circuit coupled across one of the cascaded filters”. Claim 23 recites, in part, “bypass means for bypassing at least one of the cascaded filters”.

The Office Action alleges that the cascade filters are OP1 and OP3 in FIG. 7 of Ali. The specification of Ali describes OP1 and OP3 as op-amp filters as set forth below.

The filters are of similar construction and in the interests of brevity the filter OP1 will be described in detail. An op-amp 100 has one input 102 connected to ground. A resistor 103 is connected to a second input 104 of the op-amp. A feedback capacitor 108 is coupled between an output 106 of the op-amp 100 and the second input 104.

Ali at col. 6, lines 21-26.

The Office Action alleges an admission that “Ali does not specifically disclose the feature of a bypass circuit coupled across one of the cascaded filters, and a plurality of cascaded filters wherein the bypass circuit comprises a switch, wherein the cascaded filters each comprises a biquad filter.” Office Action at page 2.

Presumably, the Office Action alleges that Hornak makes up for the teaching deficiencies of Ali.

However, Applicants believe that the Examiner has not considered the consequences of combining the alleged teachings of Hornak with Ali.

Which op amp filter OP1 or OP3 is the Examiner suggesting to bypass?

In fact, it makes no sense to bypass either op-amp filter OP1 or op-amp filter OP2.

First, each op-amp filter OP1 and op-amp filter OP3 is essential to the functioning of the modulator 54 as described in Ali. *So how can the Examiner proposed to modify Ali such that the modulator 54 no longer serves its purpose?*

The Examiner is reminded that M.P.E.P. § 2143.01(V) states that “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification”. M.P.E.P. at page 2100-137 (Rev. 3, Aug. 2005).

Second, if the Examiner bypasses either op-amp filter OP1 or op-amp filter OP3, then modulator 54 would no long be a fourth-order, time-continuous Sigma-Delta modulator 54.

Third, the Examiner cannot bypass op-amp filter OP3 because it is cross-coupled with op-amp filter OP4. This would destroy the cross coupling between op-amp filter OP3 and op-amp filter OP4. Needless to say, destroying the cross coupling would render the modulator 54 ineffective and possibly inoperable.

Fourth, the Examiner cannot bypass op-amp filter OP1 because it avoids introducing a dc offset to the outputs of the other three cross-coupled stages. See, e.g., Ali at col. 5, lines 1-2.

For at least the above reasons, even if Hornak makes up for the teaching deficiencies of Ali (which Applicants do not concede), the modifications to Ali would be fatal to the operation and intended purpose of the radio receiver of Ali.

Ali cannot serve as the basis for an obviousness rejection for the reasons set forth above.

Lastly, the Examiner is respectfully requested to particularly point out where Hornak makes up for the teaching deficiencies of Ali by describing “a bypass circuit coupled across one of the cascaded filters” as set forth in claim 1 and “bypass means for bypassing at least one of the cascaded filters” as set forth in claim 23.

Applicants respectfully submit that, if the Examiner cannot point out with particularity in Hornak where Hornak teaches “a bypass circuit coupled across one of the cascaded filters” as set forth in claim 1 and “bypass means for bypassing at least one of the cascaded filters” as set forth in claim 23, then the Examiner has not presented a *prima facie* case of obviousness. M.P.E.P. § 2142 states that “[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness”. M.P.E.P. at 2100-133 (Rev. 3, Aug. 2005).

For at least the above reasons, it is respectfully requested that the rejection be withdrawn with respect to claims 1-15 and 23-35.

Claim 44

Claim 44 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Ali.

Applicants have amended claim 44 to now recite the elements that were previously set forth in claim 46. Claim 46 has been cancelled without prejudice.

It is respectfully requested that the rejection of claim 44 be withdrawn.

Claims 45 and 46

Claims 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being obvious over Ali in view of U.S. Patent No. 5,612,975 (“Becker”). Applicants traverse the rejection as set forth below.

Claim 46 has been canceled without prejudice.

Claim 45 depends from claim 44 which now recites “a plurality of bypass circuits each being coupled across a different one of the biquad filters”. Neither Ali nor Becker teaches at least these elements.

It is therefore respectfully requested that the rejection be withdrawn with respect to claim 45.

Claims 47 and 48

Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being obvious over Ali in view of Becker in view of Hornak.

As discussed above, Ali cannot be modified by Hornak. The obviousness rejection cannot be maintained.

It is respectfully requested that the rejection of claims 47 and 48 be withdrawn.

Claims 75-81

Claims 75-81 stand rejected under 35 U.S.C. § 103(a) as being obvious over Hornak in view of U.S. Patent No. 6,714,776 (“Birleson”).

Claims 78-80: Zeros

Claim 78 recites, in part, “introducing a **zero** to filter a frequency”. Claim 79 recites, in part, “introducing a plurality of **zeros** each filtering a different frequency”. Claim 80 recites, in part, “wherein the introducing of the **zeros** comprises programming the number of **zeros** introduced”.

Neither Hornak nor Birleson even mentions zeros. Since Hornak and Birleson do not teach anything with regard to introducing a zero or zeros, Hornak and Birleson do not render obvious the subject matter recited in claims 78-80.

It is respectfully requested that the rejection of claims 78-80 be withdrawn.

Claim 75-77: Programming an Order of Complex Filtering

Claim 75 has been amended to include the elements as set forth in claim 81. Claim 81 has been cancelled without prejudice. Claim 75 now recites, in part, “wherein the channel selection further comprises **programming an order of complex filtering**”.

U.S. Application No. 09/692,420
Amendment dated October 18, 2006
In Response to Office Action of July 18, 2006

Applicants respectfully request that the Examiner point out where Hornak and Birleson teach channel selection that includes programming **an order** of complex filtering.

Applicants respectfully request that the Examiner point out where Hornak and Birleson teach **complex** filtering.

It is respectfully requested that the rejection of claim 75-77 be withdrawn.

Conclusion

In view of at least the foregoing, it is respectfully submitted that the pending claims 1-45 and 47-80 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

The Commissioner is hereby authorized to charge additional fees or credit overpayments to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Dated: October 18, 2006

Respectfully submitted,

/Michael T. Cruz/

Michael T. Cruz

Reg. No. 44,636

McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th Floor
Chicago, Illinois 60661
Telephone: (312) 775-8084
Facsimile: (312) 775-8100